

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003391 A1

(51) International Patent Classification⁷: **C12Q 1/68**

(21) International Application Number:
PCT/KR2004/001652

(22) International Filing Date: 5 July 2004 (05.07.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2003-0045523 5 July 2003 (05.07.2003) KR

(71) Applicant (for all designated States except US):
POSTECH FOUNDATION [KR/KR]; San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Kimoon** [KR/KR]; Dept. of Chemical Engineering Pohang University of Science and technology, San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR). **KANG, Jin-Koo** [KR/KR]; Dept. of Chemical Engineering Pohang University of Science and technology, San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR). **JEON, Woo-Seong** [KR/KR]; Center for Smart Supramolecules Pohang University of Science and Technology, San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR). **JON, Sang-Yong** [KR/KR]; Dept. of Chemical Engineering Pohang University of Science and Technology, San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR). **NARAYANAN, Selvapalam** [IN/KR];

Dept. of Chemical Engineering Pohang University of Science and Technology, San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR). **OH, Dong-Hyun** [KR/KR]; Dept. of Chemical Engineering Pohang University of Science and Technology, San 31 Hyoja-dong, Nam-gu, Pohang-City, Kyungsangbuk-do 790-784 (KR).

(74) Agent: **LEE, Young-Pil**; The Cheonghwa Bldg., 1571-18 Seocho-dong, Seocho-gu, Seoul 137-874 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

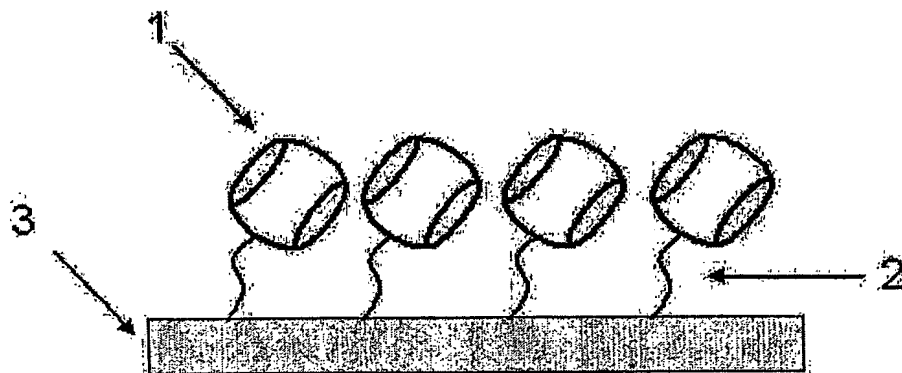
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CUCURBITURIL DERIVATIVE-BONDED SOLID SUBSTRATE AND BIOCHIP USING THE SAME



(57) Abstract: Provided is a cucurbituril derivative-bonded solid substrate in which a cucurbituril derivative of Formula 1 is covalently bonded to a modified solid substrate of Formula 2. A protein chip, a gene chip, and a sensor for biomaterial assay using the cucurbituril derivative-bonded solid substrate are also provided.